

Response to Final Office Action dated June 9, 2005
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This listing of claims replaces all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1-35 (cancelled without prejudice)

36. (previously added) A protective enclosure for a touch screen device having a touch screen comprising:

a shell that is capable of enclosing and substantially surrounding said touch screen device, said touch screen device being a separate unit from said protective enclosure, said shell being adapted to insert and remove said touch screen device by hand, said shell being substantially submersibly watertight, substantially rigid and substantially crush-resistant, said shell being larger than said touch screen device so that there is a gap between an outer surface of said touch screen device and an inner surface of said shell so that said shell may flex when subjected to a crushing force without transmitting said force directly to said touch screen device, said shell having an elevated protective rim substantially surrounding a perimeter of said touch screen of said touch screen device so that when said touch screen device is disposed in said enclosure, said touch screen of said touch screen device is recessed with respect to said protective rim of said shell so that said elevated protective rim protects said touch screen from deflection and breakage by contact with an object that is larger than said perimeter of said protective rim; and

a flexible protective membrane that is integrally fixed on said shell so that said flexible protective membrane is disposed over said touch screen of said touch screen device when said touch screen device is disposed in said enclosure, said flexible protective membrane having a back side that has a substantially planar smooth surface that is adjacent to said touch screen of said touch screen device when said touch screen device is disposed in said enclosure so that tactile inputs on a front side of said flexible protective membrane are communicated to said touch screen through said flexible protective membrane, said flexible protective membrane being at least partially transparent such that said touch screen is visible

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through said flexible protective membrane so that said touch screen is capable of displaying and capturing information through said flexible protective membrane.

37. (previously added) The protective enclosure of claim 36 wherein said shell is made of a rigid plastic that is substantially devoid of soft PVC, thermoplastic elastomers, and thermoplastic polyurethanes, so that said shell is substantially crush-resistant.

38. (previously added) The protective enclosure of claim 36 wherein said shell is formed from polycarbonate having sufficient thickness to make said shell substantially crush-resistant.

39. (previously added) The protective enclosure of claim 36 wherein said shell is made of a rigid plastic that has a flexural modulus of at least 310 kilopounds per square inch so that said shell is substantially crush-resistant.

40. (previously added) The protective enclosure of claim 36 further comprising at least one shock-absorbing insert disposed in said gap between said touch screen device and said shell.

41. (previously added) The protective enclosure of claim 36 wherein said flexible protective membrane is sufficiently thin to transmit smooth strokes from a stylus to said touch screen without interruption of said strokes, said flexible protective membrane being sufficiently smooth and sufficiently firm to prevent said stylus from catching on said membrane.

42. (previously added) The protective enclosure of claim 41 wherein said shell of said protective enclosure further comprises grip-enhancing structures that enable said protective enclosure to be securely held by hand in slippery conditions.

43. (previously added) The protective enclosure of claim 41 further comprising at least one recessed area in said front side of said flexible protective membrane, said

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recessed area disposed to align with at least one predetermined region of said touch screen of said touch screen device when said touch screen device is disposed in said enclosure, said recessed area having a perimeter edge that provides tactile feedback, said recessed area being sufficiently thin so that said tactile inputs are transmitted through said flexible protective membrane to said touch screen of said touch screen device when said touch screen device is disposed in said enclosure.

44. (previously added) The protective enclosure of claim 43 further comprising textured areas in said front side of said flexible protective membrane, said textured areas providing tactile feedback, said textured areas customized through the incorporation of distinct textures that overlay and correspond to distinct functional areas of said touch screen device.

45. (previously added) The protective enclosure of claim 44 further comprising printed areas in said flexible protective membrane, said printed areas providing visual feedback, said printed areas customized through the incorporation of distinct printing that corresponds to distinct functional areas of said touch screen device.

46. (previously added) The protective enclosure of claim 45 further comprising colored areas in said flexible protective membrane, said colored areas providing visual feedback, said colored areas customized through the incorporation of distinct colors that correspond to distinct functional areas of said touch screen device.

47. (previously added) A method of manufacturing a protective enclosure for a touch screen device having a touch screen comprising:
providing a protective shell that is capable of enclosing said touch screen device, said touch screen device being a separate unit from said protective enclosure, said shell being adapted to insert and remove said touch screen device by hand, said shell being substantially rigid and substantially crush-resistant, said shell being larger than said touch screen device so that there is a gap between an

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outer surface of said touch screen device and an inner surface of said shell so that said shell may flex when subjected to a crushing force without transmitting said force directly to said touch screen device, said shell having an elevated protective rim substantially surrounding a perimeter of said touch screen of said touch screen device so that when said touch screen device is disposed in said enclosure, said touch screen of said touch screen device is recessed with respect to said protective rim of said shell so that said elevated protective rim protects said touch screen from deflection and breakage by contact with an object that is larger than said perimeter of said protective rim;

providing a compressible gasket that is disposed in a perimeter portion of said shell that creates a watertight submersible seal;

forming a clamp that clamps two portions of said shell in a closed position so as to compress said compressible gasket when said two portions of said shell are clamped in said closed position so that shell is submersibly watertight;

disposing said gasket in a perimeter area of one portion of said two portions of said shell so that said shell is submersibly watertight when said two portions of said shell are clamped together causing said gasket to be compressed to form a submersibly watertight seal;

providing a flexible protective membrane that is capable of being integrally fixed on one portion of said two portions of said shell so that said flexible protective membrane is disposed over said touch screen of said touch screen device when said touch screen device is disposed in said enclosure, said flexible protective membrane having a back side that has a substantially planar smooth surface that is adjacent to said touch screen of said touch screen device when said touch screen device is disposed in said enclosure so that tactile inputs on a front side of said flexible protective membrane are communicated to said touch screen through said flexible protective membrane, said flexible protective membrane being at least partially transparent such that said touch screen is visible through said flexible protective membrane so that said touch screen is capable of displaying and capturing information through said flexible protective membrane;

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fixing said flexible protective membrane onto said one portion of said two portions of said protective shell so that said flexible protective membrane and said protective shell form a protective enclosure for said touch screen device.

48. (previously added) The method of claim 47 further comprising:

forming recessed areas in said front side of a flexible protective membrane, said recessed areas disposed to overlay and correspond to functional control areas of said touch screen device.

49. (previously added) The method of claim 47 further comprising:

printing on predetermined areas of said flexible protective membrane to customize said flexible protective membrane.

50. (previously added) The method of claim 47 further comprising customizing:

texturing predetermined areas of said flexible protective membrane to customize said flexible protective membrane.

51. (previously added) The method of claim 47 further comprising customizing:

coloring predetermined areas of said flexible protective membrane to customize said flexible protective membrane.

52. (previously added) The method of claim 47 wherein said step of forming recessed

areas in a front side of a flexible protective membrane is implemented using thermoforming that enables thin-walled parts as required for precise recessed areas and an extensive choice of patterns, finishes, and textures.

53. (previously added) The method of claim 47 wherein said step of forming recessed

areas in a front side of a flexible protective membrane is implemented using injection molding.